

ABSTRACT OF THE DISCLOSURE

The present invention discloses methods for manufacturing a capacitor of a semiconductor device
5 employing doped silicon film as an electrode and an oxide film-nitride film-oxide film as a dielectric film. An interlayer insulating film is formed on a semiconductor substrate. A storage electrode is formed consisting of a doped polysilicon on the interlayer insulating film. A first
10 oxide film is formed on the storage electrode that is subjected to a thermal treatment in an atmosphere containing an n-type impurity to implant the impurity into the first oxide film. A nitride film is formed on the first oxide film, whereby the impurity in the first oxide film is diffused
15 into the nitride film. A second oxide film is formed on the nitride film. A plate electrode is then formed on the second oxide film.